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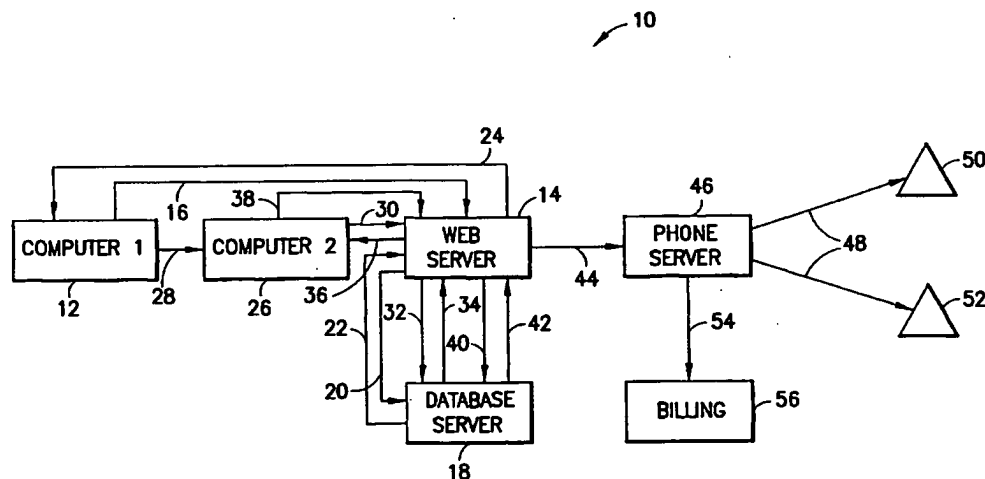
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(54) Title: **SYSTEM FOR ENABLING ONE-CLICK TELEPHONE CONNECTIONS**



(57) Abstract: A system (10) provides a one-click operation for offering an e-mail recipient (50, 52) the opportunity to establish a voice connection with an e-mail sender (12, 26). The system (10) permits the e-mail sender (12, 26) to establish an account. The account includes a telephone number at which the e-mail sender (12, 26) may be reached. The system (10) inserts a link in the e-mail. If the e-mail recipient (50, 52) clicks on the link, the system (10) determines if the recipient's telephone number is known. If not, the system asks the e-mail recipient (50, 52) to provide an appropriate telephone number. Once the system (10) has both telephone numbers, the system (10) will establish a voice connection between the e-mail sender (12, 26) and recipient (50, 52) by telephone without the parties having to re-enter information.

**System For Enabling One-Click Telephone Connections****BACKGROUND OF THE INVENTION****1. Field of the Invention**

5           This invention is directed to the field of telecommunications, and, more particularly, to systems for enabling telephone connections via the World Wide Web or Internet. Specifically, one embodiment of the present invention provides a World-Wide-Web-based or  
10 Internet-based telephone operating system for enabling one-click telephone connections via a World Wide Web or Internet telephone server. More specifically, a preferred embodiment of the present invention provides a convenient way for an e-mail user to connect by  
15 telephone with another person from whom the user receives e-mail and further enables seamless billing of the associated telephone call charges.

**2. Description of the Related Art**

20           In the modern age of electronic communications, there is still a need and desire for direct, person-to-person communications, such as chat rooms and classic voice telephony. While instantaneous communication via instant messaging or chat has gained  
25 acceptance, some communication is preferably handled on a more interpersonal level, and voice telephony is a way to accomplish that by providing audible communication that enriches content with intonation and inflection absent from communication by text. There is thus a need  
30 for providing a simple and efficient system for expediting voice communications as an adjunct or an alternative to text communications over the Internet or World Wide Web, collectively referred to as the Internet for convenience.

While the act of dialing a telephone, or using a speed dialer, is simple enough, oftentimes busy people are unable to establish direct connection by telephone on a first, or even second or third, attempt, requiring  
5 them to leave voice mails, phone messages or e-mails instead of establishing direct connection. There is thus a need for providing a simple system for facilitating direct person-to-person telephone communication.

10 In the business arena, there is recognition, for example, that direct person-to-person sales is an effective tool that is gradually being supplanted by e-sales in our technology-oriented society. Accordingly, U.S. Patent 5,991,394 to Dezonno *et al.* establishes an  
15 Internet-based telephone call-back system for businesses. In the system disclosed in that patent, a business may establish a telephone call-back on a web page at the web site of the business so that a potential customer browsing through the web site may initiate a  
20 telephone call-back request to a representative of the business. Specifically, the potential customer positions a mouse pointer on a button on the web page of the business and clicks the mouse, which then prompts the potential customer to leave his or her name and  
25 telephone number for eventual call-back by a representative of the business. While this has utility in the field of direct sales, it has limited advantage for consumer-oriented businesses where response time is critical, and is not particularly useful in the field of  
30 interpersonal communications in a non-business context. Additionally, it requires that each user individually input his or her personal information, such as name and telephone number, each time he or she contacts a business seeking a personal call-back. For some

consumers, typing this information on a repeated basis and surrendering one's name and telephone number are disincentives to use the disclosed system, and may discourage some people from taking advantage of the  
5 call-back request features of the system.

There are also various subscriber services available on the Internet for placing telephone calls to individuals and effecting conference calls. For example, j2 Global Communications, Inc. offers such a  
10 service through <http://www.j2.com>. However, this service has various disadvantages. Each time that a person wants to place a telephone call, he or she must enter the name(s) and telephone number(s) of the person(s) to be telephoned. There is no address book  
15 utility to store names and telephone numbers to facilitate telephone calls to persons who are called occasionally. The service does not provide a mechanism to contact a person to be called other than by telephone, so if the person's telephone line is busy or  
20 the person is currently at a different telephone number, there is no alternative procedure to alert the person that someone wants to engage in a telephone call.

Additionally, eDial, Inc. offers a service through <http://www.edial.com>, that enables a person to  
25 cut-and-paste or drag a name(s) and telephone number(s) of a person(s) to be telephoned to enter the needed information to place the telephone call(s) or to dial directly from a Microsoft Outlook Contacts list. However, the service does not provide a mechanism to  
30 contact a person to be called other than by telephone, so if the person's telephone line is busy or the person is currently at a different telephone number, there is no alternative procedure to alert the person that someone wants to engage in a telephone call.

There is thus a need for a telephone call-back system in which a user can be efficiently reached and is required to enter his or her personal information, such as name and telephone number, only once with a server  
5 dedicated to establishing telephone connections. It would also be desirable for the personal information to be secure.

#### SUMMARY OF THE INVENTION

10 One embodiment of the present invention is directed to a system for providing one-click operation for offering an e-mail recipient the opportunity to establish a telephone voice connection with an e-mail sender. The system permits the e-mail sender to  
15 initially establish, preferably during a subscription procedure, an account with a telephone server. The account preferably includes a telephone number at which the e-mail sender may be reached. The system also permits the sender to insert a link in an e-mail message,  
20 referred to simply as an e-mail for convenience. If the e-mail recipient clicks on the link in the e-mail from the sender, the system determines whether or not the e-mail recipient's telephone number is registered. If not, the system asks the e-mail recipient to provide his or  
25 her telephone number. If the recipient does not want to participate in a telephone call, he or she simply exits. Once the system of the present invention has both telephone numbers, the system establishes a telephone connection between the e-mail sender and recipient. The  
30 server files can be secured by password protection or other security feature to prevent one's name and telephone number from being disclosed to unauthorized personnel.

The various features of novelty which characterize the present invention are pointed out with particularity in the claims annexed to and forming a part of the disclosure. For a better understanding of the various embodiments of the present invention, its operating advantages, and specific objects attained by its use, reference should be had to the drawings and accompanying description in which there are illustrated and described preferred embodiments of the invention.

#### BRIEF DESCRIPTION OF THE DRAWINGS

In the drawings:

Fig. 1 is a schematic diagram showing a system for establishing voice communications in accordance with the present invention;

Fig. 2, comprising Figs. 2A to 2C, is a flow chart of a method in accordance with the present invention for enabling one-click voice communications; and

Figs. 3-9 are pages displayed by the system shown in Fig. 1 during performance of the method shown in Fig. 2.

#### DETAILED DESCRIPTION OF THE PRESENTLY PREFERRED EMBODIMENTS

In Fig. 1, generally indicated at 10, there is shown a system in accordance with one embodiment of the present invention for providing an interoperable one-click system for establishing two-way voice communications using a computer network.

The operation of system 10 typically begins with a user who desires to subscribe to system 10. Initially, the user affirmatively contacts the provider of system 10 in order to establish an account. This may be accomplished in any traditional manner. For example,

the user may access the web site of the provider of system 10 and perform a registration procedure to subscribe. A subsequent user has the option to subscribe in response to a request for a voice call-back made by the initial user simply by clicking on a link in an e-mail and performing an ensuing registration procedure; or the subsequent user may subscribe on his or her own in the same manner as the first user so that the subsequent user may institute voice call-back requests without having first received such a voice call-back request. In either event, at least one prospective user subscribes to system 10. The initial subscriber may sign on and subscribe through a web page at the web site of the provider of system 10 and download the appropriate client software for use on his or her own Internet access device, such as a personal computer, a personal digital assistant (PDA), or other access device. Alternatively, the user may purchase a package with enabling software at a local vendor, install it and then contact the provider of system 10 to establish an account.

Considered in more detail, in a preferred embodiment of the present invention, a user may activate a first Internet access device 12. The user operates first access device 12 to contact a web server 14 on a line 16 to establish an account. This initial contact with web server 14 causes web server 14 to contact a file or database server 18 and initiate the setup of an account 20 for the user of first access device 12. The user of first access device 12 provides a basic first set of identifying information to web server 14, such as the telephone number at which the user wishes to be contacted, user name and address, and may include information regarding whether that telephone line is in

use by the device which is accessing web server 14 at that time (meaning that web server 14 would have to delay the establishment of voice communications until after the current session is concluded), etc.

5 Preferably, the user is also stepped through a password selection procedure so that the identifying information is password-protected. This information is then relayed to database server 18 and stored. Furthermore, the user of first access device 12 preferably provides  
10 information for billing any call-back telephone calls and certain technical information relating to the type of telephone connection which may be established, such as an extension or other access-related information.

Once the user's account is established,  
15 database server 18 preferably sends an acknowledgement message 22 to web server 14 that the user of first access device 12 is now authorized to use system 10. The web server 14 then transmits downloadable enabling software 24 to first access device 12. This software  
20 will enable the user of first access device 12 to request a voice call-back from another user.

After the user of first access device 12 has established his or her account, he or she may contact a user of a second Internet access device 26 and request  
25 the user of second access device 26 to initiate a voice call-back to the user of first access device 12. This may be accomplished by inserting an actuatable link into an e-mail which is sent on a line 28 from first access device 12 to second access device 26 over a computer  
30 network. Instant messaging may be used rather than e-mail to provide an immediate voice call-back request. The link may be a URL sent to web server 14. This link enables the establishment of a voice communications channel as described in more detail below. The link may

be established through use of a stand-alone program accessible through the program menu of first access device 12, or may even be so simple as clicking on an icon that resides in the startup tray or dragging and dropping an icon appearing on the computer desktop of the user of first access device 12 into an e-mail or instant message sent on line 28, thereby enabling the transmission of the voice call-back request link. If line 28 is the telephone line needed to establish voice communications, for example, the computer network may be the Internet and first access device 12 is connected to the telephone line by a modem, then the user who initiates the voice call-back request must release the telephone line before the user of second access device 26 can initiate the call-back. The software preferably displays a message to such effect to the user of first access device 12. Alternatively, the computer and telephone connections can be used separately or simultaneously, for example, there may be a broadband connection, DSL or other service, so that a voice call-back can be received without conflict. As another alternative, the user of first access device 12 may have a second available telephone line that he or she may specify as the call-back telephone number.

Once the user of second access device 26 receives e-mail on line 28 with the voice call-back request link, he or she must decide whether or not to initiate the call-back. If, on the other hand, she or he does not, she or he need only delete or otherwise discard the e-mail. If first and second access devices 12 and 26 reside on the same computer network, then a network server can monitor the status of the request and notify the user of first access device 12 if the other user has opened the e-mail sent on line 28 and by non-

response elected to disregard the call-back request. Preferably, system 10 can also track opened e-mails across different servers. If, on the other hand, the user of second access device 26 desires to establish a voice communications channel with the user of first access device 12, he or she simply clicks on the link contained in the e-mail sent on line 28. This initiates a message 30 to web server 14 from second access device 26. In response, web server 14 sends a query 32 to database server 18 to determine whether or not a telephone number corresponding to a telephone that resides at second access device 26 is stored or listed in database server 18. If second access device 26 is listed, a voice communications channel may be readily established. On the other hand, if second access device 26 is not listed, database server 18 sends a message 34 to web server 14 to relay a message 36 to the user of second access device 26 offering the opportunity to establish an account and provide a second set of information 38 similar to that already provided by the user of first access device 12, including the telephone number at which the user of second access device 26 may be reached. If the user of second access device 26 declines, then no voice communications channel will be established, and a suitable message may be relayed by web server 14 to the user of first access device 12.

If, however, the user of second access device 26 elects to establish his or her own account, he or she provides the required information 38 which is relayed by web server 14 as message 40 to database server 18.

Once telephone numbers for the users of both first and second access devices 12 and 26 are available to database server 18, database server 18 sends the two telephone numbers 42 and a suitable instruction to web

server 14 which relays in a message 44 those telephone numbers and an instruction to establish a voice connection between the two telephones to a phone server or switch 46. Preferably, phone server 46 will then  
5 establish a telephone connection 48 between a first telephone 50, corresponding to the telephone number of the user of first access device 12, and then to a second telephone 52, corresponding to the telephone number of the user of second access device 26, so that the call-  
10 back requester is first connected to assure his or her availability and the call-back recipient is connected only if the requester answers his or her telephone 50.

It will also be appreciated that the user of first access device 12 may send multiple e-mail call  
15 requests or a single e-mail with the same link to multiple second access devices 26, in an effort to establish a telephone conference call.

In accordance with the various embodiments of the present invention, the telephone connection may be  
20 established with either the call-back requester first or the call-back recipient first, or the participants may be provided the opportunity to decide who is connected first. Once the voice connection is established, suitable billing information 54 is provided to a billing  
25 device, such as billing server 56 where the call detail is stored. The system 10 may be established to provide for billing to either the call-back requester or the call-back recipient (i.e., the initiator of the actual telephone call) or a designated third party under any  
30 desired protocol. The billing information may be transmitted to a local exchange carrier (LEC) for incorporation in the periodic telephone bill received by the subscriber to system 10.

In operation, a new user may contact the web site for the provider of system 10, as indicated by the numeral 62 shown in Fig. 2A. The web server 14 returns a page to the user requesting that the user enter  
5 identification information, as indicated by the numeral 64 shown in Fig. 2A. The user enters the information, which is sent to web server 14, as indicated by the numeral 66 shown in Fig. 2A, and relayed to database server 18, as indicated by the numeral 68 shown in Fig.  
10 2A. The server 14 then requests the user to download the software client so that the user can send a link in an e-mail to request a voice call-back, as indicated by the numeral 70 shown in Fig. 2A. The user downloads the client and clicks to install the program. The program  
15 then installs itself into the user's system startup tray. The program runs at startup and remains running in the background all the time, where it monitors which window has the focus at any given moment. Then, when activated by a click, the program reads and parses the  
20 cookie that resides at first access device 12, prepares a string to be inserted and inserts the specially prepared string into the active window at the selected insertion point. It will then return to its normal monitoring activity.

25 Referring to Fig. 2B, when the user, as an e-mail sender, clicks on a system tray icon, a string is inserted into the e-mail he or she is writing, as indicated by the numeral 71. The string preferably comprises a URL that accesses a particular script at the  
30 web site of web server 14. The e-mail sender then sends the e-mail with the embedded link, as indicated by the numeral 72 shown in Fig. 2B. The e-mail recipient then clicks on the link, as indicated by the numeral 73 shown in Fig. 2B. The e-mail recipient's browser is

automatically opened, and the script is called, as indicated by the numeral 74 shown in Fig. 2B. The script then parses the URL for the e-mail sender's identification number. The script looks up the e-mail sender's telephone number in the database, as indicated by the numeral 75 shown in Fig. 2B. The script checks the e-mail recipient's computer for a cookie, as indicated by the numeral 76 shown in Fig. 2B. If a cookie exists, then the script retrieves the cookie, parses it for the e-mail recipient's identification number and looks up the recipient's telephone number in the database, as indicated by the numeral 77 shown in Fig. 2B. The web server 14 sends the telephone numbers to phone server 46, as indicated by the numeral 78 shown in Fig. 2B. The phone server 46 preferably places a telephone call to the e-mail sender, then places a telephone call to the e-mail recipient and connects the two calls as a conference call, as indicated by the numerals 79, 80 and 81 shown in Fig. 2B, respectively. Additionally, phone server 46 alerts the billing server 56 to bill the e-mail sender, as indicated by the numeral 82 shown in Fig. 2B.

If there is no cookie on the e-mail recipient's computer, as indicated by the numeral 85 shown in Fig. 2C, then the script presents a screen asking for a telephone number to dial and other identification information, as indicated by the numeral 86 shown in Fig. 2C. The e-mail recipient enters the requested information, as indicated by the numeral 87 shown in Fig. 2C. The script assigns the e-mail recipient an identification number, logs the e-mail recipient's telephone number and other identification information into the database, as indicated by the numeral 88 shown in Fig. 2C, and creates a cookie on the

e-mail recipient's computer, as indicated by the numeral 89 shown in Fig. 2C. The web server 14 sends the telephone numbers to phone server 46, as indicated by the numeral 78 shown in Fig. 2B. The phone server 46  
5 then preferably initiates a telephone call to the e-mail sender, next places a telephone call to the e-mail recipient and connects the two calls as a conference call, as indicated by the numerals 79, 80 and 81 shown in Fig. 2B, respectively. Additionally, phone server 46  
10 alerts the billing server 56 to bill the e-mail sender, as indicated by the numeral 82 shown in Fig. 2B.

In one exemplary implementation of the subscription procedure, a new user, i.e., someone who has neither sent nor received an e-mail call-back  
15 request, can preferably subscribe to system 10 for the first time by accessing the web site for the provider of system 10. The web site displays a greeting page, as shown in Fig. 3. The user then positions the mouse pointer on the "Continue" button shown in Fig. 3 and  
20 clicks the left mouse button, and the setup page shown in Fig. 4 is then displayed.

As shown in Fig. 4, the setup page prompts the new user to provide a telephone number and optional extension number. If an extension number is entered,  
25 the new user will be prompted to designate whether dial forwarding or voice forwarding is needed to reach the extension.

Additionally, the new user enters his or her e-mail address, user name, name and mailing address, as  
30 shown in Fig. 4. The entry of this information may be aided by the use of pull-down menus, as indicated by the boxes for "State" and "Country".

Preferably, the new user is also prompted to step through a password setting procedure, which

requires entry and re-entry of a six-character alphanumeric password to password-protect the information provided by the new user. The new user also may enter a password hint question and answer to aid the user's memory of the password.

After the new user enters the needed information, the user next positions the mouse pointer on the "Continue" button shown in Fig. 4 and clicks the left mouse button, and the payment option page shown in Fig. 5 is then preferably displayed. As shown in Fig. 5, the new user may select to have telephone call charges added either to his or her regular telephone bill or to a credit card account.

Following selection of a payment option, the new user next positions the mouse pointer on the "Continue" button shown in Fig. 5 and clicks the left mouse button, and the download page shown in Fig. 6 is then preferably displayed. The new user positions the mouse pointer on the "Download Now" button shown in Fig. 6 and clicks the left mouse button to download the client software. When the download is complete, the new user clicks on an .exe file so that the icon will be positioned on the computer desktop or in the startup tray, or both, enabling easy insertion in future e-mails.

After the download is complete, the new user returns to the download page, positions the mouse pointer on the "Continue" button shown in Fig. 6 and clicks the left mouse button, and the instruction page shown in Fig. 7 is then preferably displayed. The new user positions the mouse pointer on the "Later" button shown in Fig. 7 and clicks the left mouse button to complete the subscription procedure and exit.

To use system 10, the subscriber first writes an e-mail and preferably explains to the e-mail recipient that clicking on the icon in the e-mail will enable a convenient voice call-back. The e-mail sender  
5 either clicks on the icon, drags and drops it into the body of the e-mail or otherwise attaches it prior to sending the e-mail. This places a link to the web site of web server 14 into the e-mail.

When the e-mail recipient opens the e-mail and  
10 clicks on the link, he or she is automatically connected to web server 14 which displays a welcome page, as shown in Fig. 8. The e-mail recipient is presented with the option of initiating the voice call-back, learning more about system 10 or merely exiting by positioning the  
15 mouse pointer on one of the respective "Call", "Tell Me More" or "Exit" buttons and clicking the left mouse button.

If the e-mail recipient clicks on the "Call" button shown in Fig. 8, a voice call-back is initiated  
20 if the e-mail recipient has previously also subscribed to system 10. If the e-mail recipient is not currently a subscriber, the setup page shown in Fig. 4 is displayed, and the e-mail recipient performs the same subscription and installation procedure described above.  
25 However, after the e-mail recipient enters the subscription information and clicks on the "Continue" button shown in Fig. 4, the "Call Now" page shown in Fig. 9 is displayed. As shown in Fig. 9, the e-mail recipient positions the mouse pointer on the "Submit"  
30 button and clicks the left mouse button to return to the e-mail. After the e-mail recipient returns to the e-mail, he or she simply clicks on the link in the e-mail to initiate the voice call-back.

The system 10 permits an e-mail sender who subscribes to system 10 to send a link with his or her e-mails enabling e-mail recipients to call-back on a regular telephone connection without the e-mail sender having to look up and dial a telephone number. The e-mail recipient is offered the same advantage in response to clicking on the link in the e-mail and subscribing to system 10. A simple one-time setup procedure enables a person to insert a link in an e-mail to request a voice call-back. Personal information, including user name, e-mail address, name and mailing address, are preferably password-protected.

In this manner, a simple and efficient system is provided to facilitate the establishment of a voice communications channel between two or more persons via the Internet. If both are subscribers to system 10, the voice communications channel can be initiated by one click on the link embedded in the e-mail sent on line 28.

While the inventive system has been described in relation to the establishment of a voice communications channel between two individuals, one of those individuals may be, in fact, a business. For example, the call-back requester may be a salesman representing a commercial enterprise, who is looking to secure call-backs for possible commercial relations. In this case, the call-back requester (i.e., the user of first access device 12) is preferably billed for that telephone call with the recipient of the call-back request (i.e., the user of second access device 26).

Thus, while there have been shown and described and pointed out fundamental novel features of the present invention as applied to various embodiments thereof, it will be understood that various

modifications and substitutions and changes in the form and details of the devices illustrated, and in their operation, may be made by those skilled in the art without departing from the spirit of the invention. For  
5 example, the actuatable link may comprise an IP address. Furthermore, although the foregoing description illustrates an example in which the communications over the communications channel are voice communications, the  
10 communications may additionally include video and/or data, as well. It is expressly intended that all combinations of those elements and/or method steps which perform substantially the same function in substantially the same way to achieve substantially the same result are within the scope of the invention. Moreover, it  
15 should be recognized that structures and/or elements and/or method steps shown and/or described in connection with any disclosed form or embodiment of the present invention may be incorporated in any other disclosed or described or suggested form or embodiment as a general  
20 matter of design choice. It is the intention, therefore, to be limited only as indicated by the scope of the claims appended hereto.

CLAIMS

1. A method of establishing voice communications by means of a computer network, comprising the steps of:

5 establishing a database, said database including a first set of information identifying a call requester;

transmitting a request to be called from said call requester to a call request recipient including a  
10 link to activate establishment of a voice communications channel;

accepting said call request in response to activating said link;

accessing said first set of information;

15 providing a second set of information identifying said call request recipient; and

establishing a voice communications channel between said call requester and said call request recipient based on said first and second sets of  
20 information.

2. The method of claim 1, wherein said step of providing said second set of information includes:

querying if said call request recipient has  
25 previously provided said second set of information in said database.

3. The method of claim 2, further comprising the step of:

30 accessing said second set of information, when said querying establishes that said call request recipient has previously provided said second set of information in said database.

4. The method of claim 2, further comprising the step of:

prompting said call request recipient to provide said second set of information in said database,  
5 when said second set of information is not already stored in said database.

5. The method of claim 1, wherein said request is transmitted over the Internet.

6. The method of claim 1, wherein said voice  
10 communications channel is a telephone line.

7. The method of claim 1, wherein said first set of information comprises a telephone number.

8. The method of claim 1, wherein said second set of information comprises a telephone number.  
15

9. The method of claim 1, wherein said request is transmitted via e-mail.

10. The method of claim 1, wherein said  
20 request is transmitted via instant messaging.

11. The method of claim 9, wherein said link within said e-mail contains the location of said first set of information in said database.

25 12. The method of claim 1, further comprising transmitting said call request to a plurality of call request recipients, and establishing a conference call with all call request recipients who accept said request.

13. The method of claim 1, wherein said first set of information includes a first telephone number of said call requester, and said second set of information includes a second telephone number of said call request recipient, and wherein said link is activated for accessing said first telephone number.

14. The method of claim 13, wherein said step of providing a second telephone number includes:  
10 querying if said call request recipient has previously provided said second telephone number in said database.

15. The method of claim 14, further comprising the step of:  
15 accessing said second telephone number, when said querying establishes that said call request recipient has previously provided said second telephone number in said database.

16. The method of claim 14, further comprising the step of:  
20 prompting said call request recipient to provide said second telephone number in said database, when said second telephone number is not stored in said database.

17. The method of claim 1, further comprising the step of:  
25 inserting said link in said request in response to clicking on or dragging and dropping an icon.

18. The method of claim 1, further comprising the step of:

sending video or data over said communications channel.

19. A system for establishing voice  
5 communications over a computer network, comprising:

a database including a first set of information identifying a call requester;

means for transmitting a request to be called from said call requester to a call request recipient,  
10 said request including means for accessing said first set of information;

means for accepting said call request;

means for accessing said first set of information;

15 means for providing a second set of information identifying said call request recipient; and

means for establishing a voice communications channel between said call requester and said call request recipient.

20 20. The system of claim 19, wherein said means for establishing a voice communications channel includes a phone server capable of establishing a telephonic connection between a first telephone number and a second telephone number.

25 21. The system of claim 19, wherein said means for transmitting a request includes means for sending an e-mail or instant message.

22. The system of claim 21, wherein said means for sending an e-mail or instant message includes

means for embedding in said e-mail or instant message a link pointing to said first set of information.

23. A system for establishing voice communications over a computer network, comprising:

5 a database including a first set of information identifying a call requester;

a first access device to initiate a request to be called from said call requester to a call request recipient;

10 a second access device to accept said call request and to provide a second set of information identifying said call request recipient;

a database server to access said first set of information; and

15 a phone server responsive to said first and second sets of information to establish a voice communications channel between said call requester and said call request recipient.

24. The system of claim 23, further comprising:

20 a web server responsive to acceptance of said call request to provide at least a portion of said first and second sets of information to said phone server.

25 The system of claim 24, wherein said web server queries said database server if said call request recipient has previously provided said second set of information, said second set of information consisting of a telephone number for said call request recipient.

26. The system of claim 25, wherein said web server prompts said call request recipient to provide

said telephone number, when said telephone number is not stored in said database.

27. The system of claim 23, wherein said call request comprises a link embedded in an e-mail or  
5 instant message. .

28. The system of claim 23, wherein said first and second sets of information are secured from unauthorized access.

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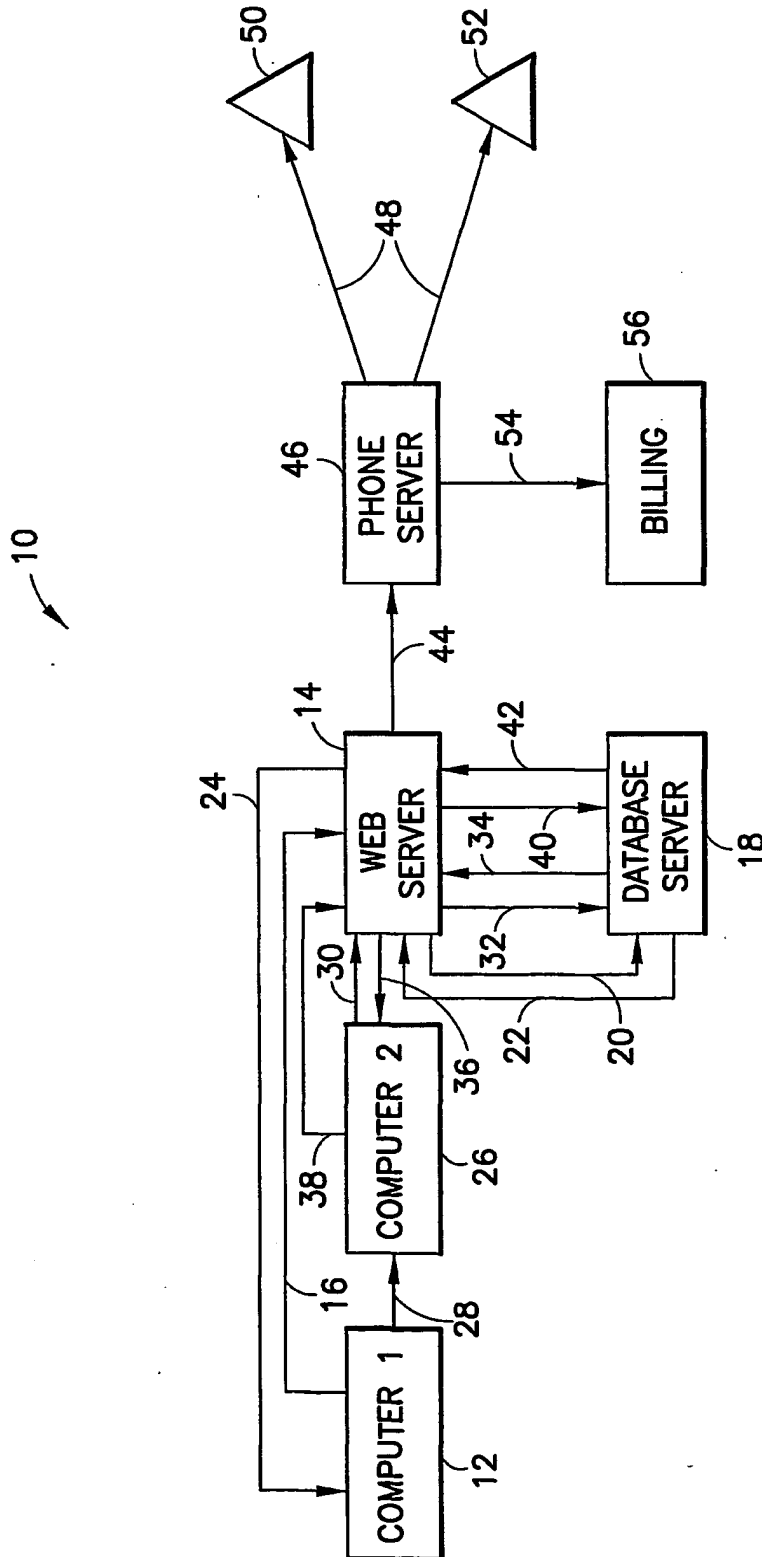
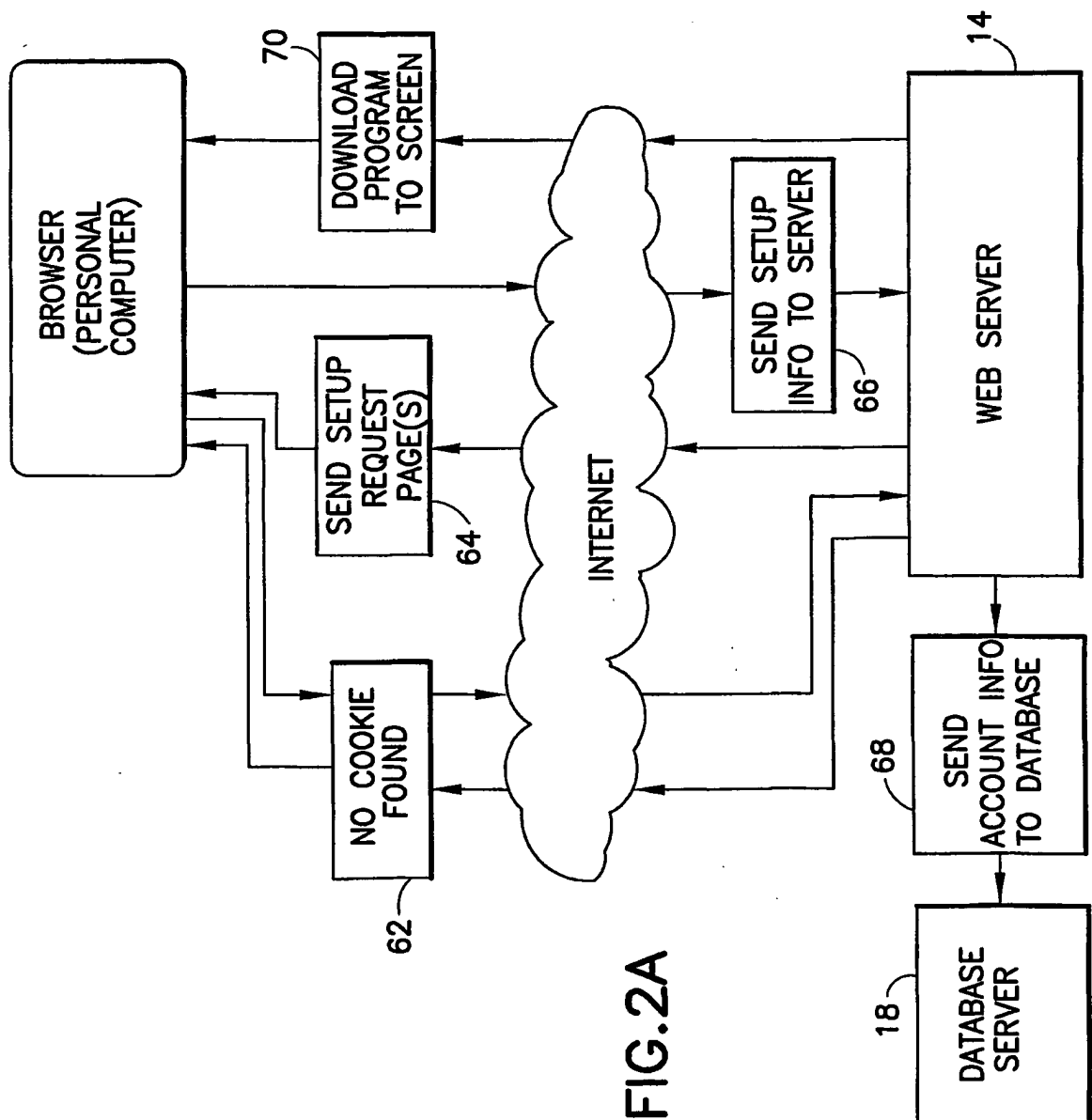


FIG.1

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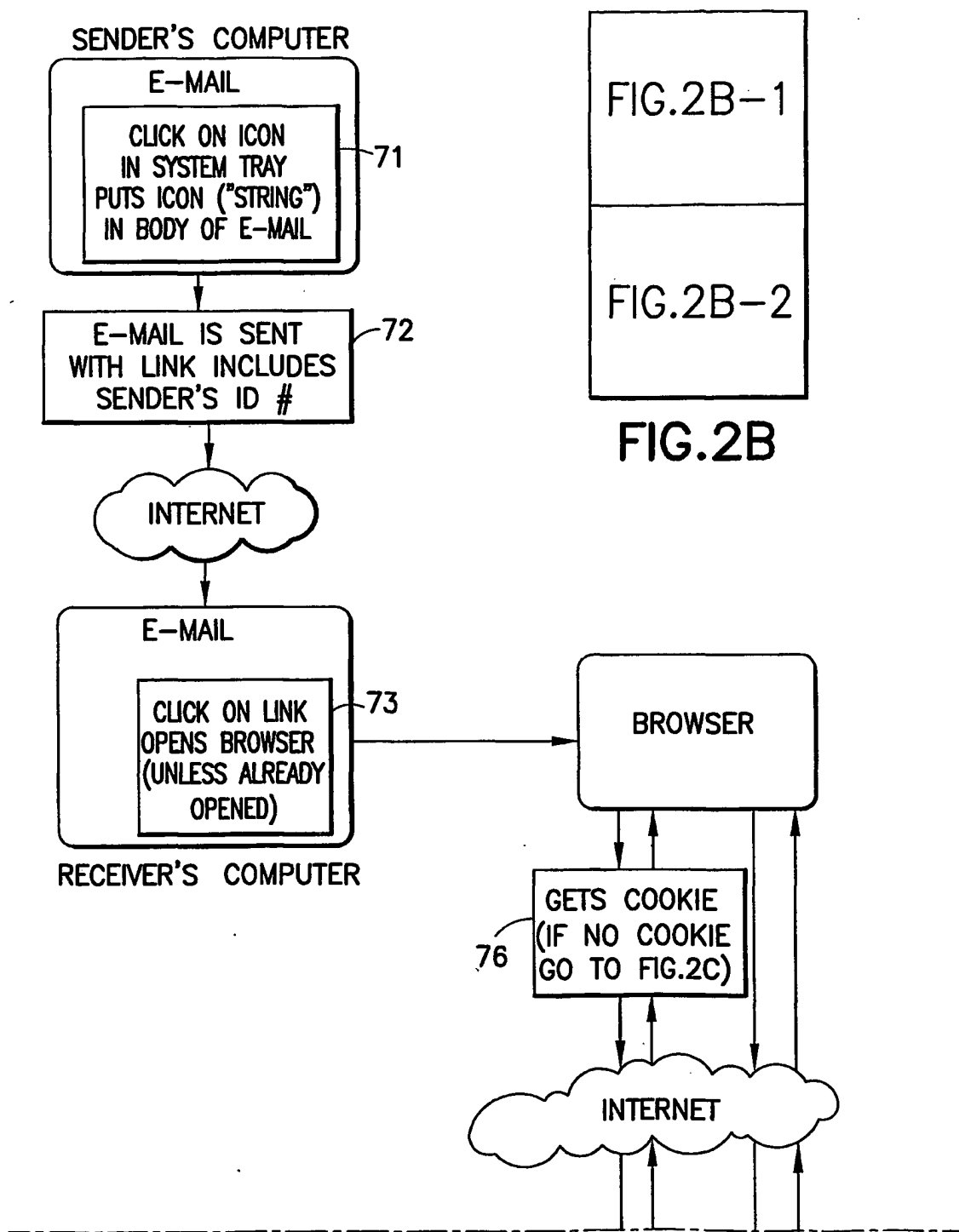


FIG.2B-1

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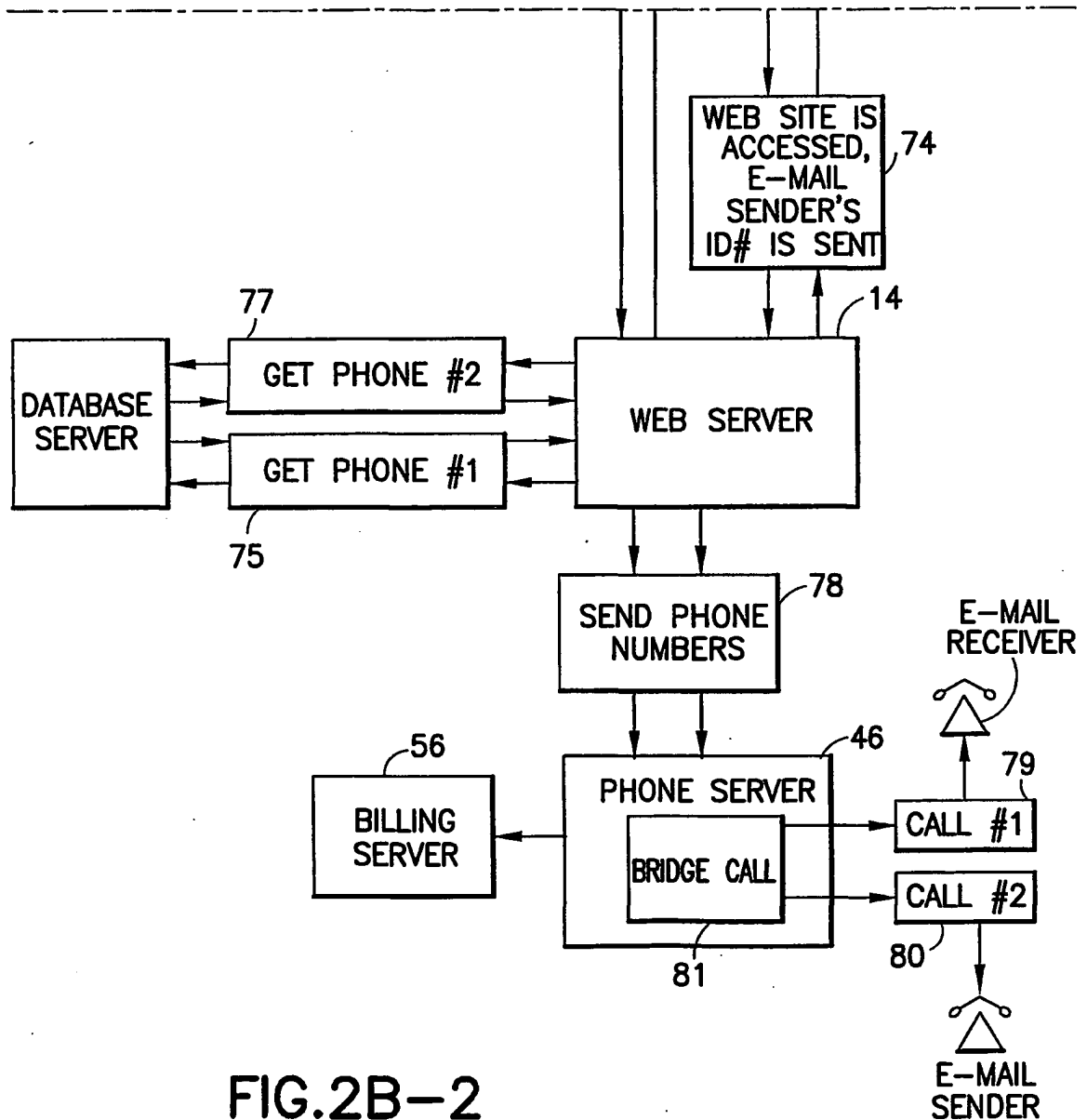
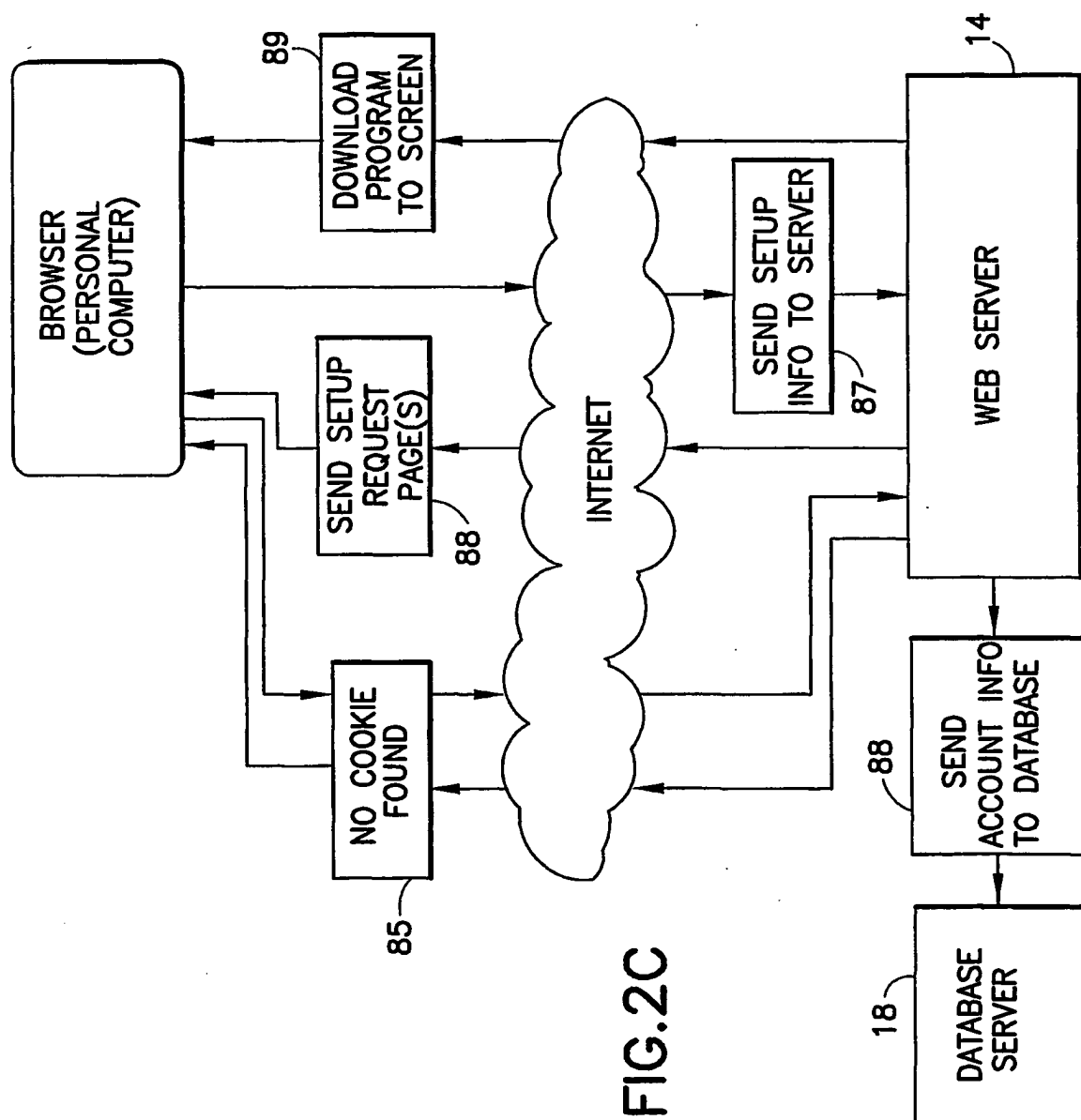


FIG. 2B-2

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## PlezeCall™

THE CONVENIENCE OF ONE TOUCH COMMUNICATIONS...

WHEN YOU SEND AN EMAIL, PlezeCall LETS THE PERSON CALL YOU BACK—ON A *REGULAR PHONE*—WITH ONE CLICK. YOU CAN SAVE MORE TIME IN ONE WEEK, THAN THE ENTIRE REGISTRATION PROCESS\*, AND THE CALLS MAY ACTUALLY COST LESS THAN YOU'RE PAYING NOW!

PlezeCall SAVES TIME TYPING, DIALING, AND LOOKING UP PHONE NUMBERS, FOR BOTH THE SENDER AND RECEIVER OF AN EMAIL.

SETUP NOW

TELL ME MORE

IF YOU ALREADY HAVE A PlezeCall ACCOUNT click here

TO EXIT THIS SIMPLE, INGENIOUS SYSTEM AND CHOOSE NOT TO DO YOURSELF AND YOUR EMAIL RECIPIENTS A FAVOR, EXIT

\*IN FACT, WITH ONE CONFERENCE CALL, YOU CAN SAVE MORE TIME THAN THE 3–5 MINUTE REGISTRATION.

UPDATED S SCREEN\_NUMBER IS NOW 10=

### FIG.3

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## PlezeCall™

### ACCOUNT SETUP...

AFTER THE 3-5 MINUTE REGISTRATION, YOU CAN START INCLUDING PlezeCall IN YOUR E-MAILS WITHOUT RE-ENTERING YOUR INFORMATION

FIRST, WE NEED A VALID E-MAIL ADDRESS:

NEXT, CREATE A 6-8 LETTER &/OR DIGIT PlezeCall PASSWORD:

TRY TO REMEMBER THIS INFORMATION. YOU'LL NEED IT TO CHANGE YOUR SETTINGS OR VIEW YOUR RECORDS.

CONTINUE

UPDATED S SCREEN\_NUMBER IS NOW 100=

\$FORM {id\_s}=796  
\$FORM {screen\_number}=100  
\$FORM {GoButton.x}=58  
\$FORM {GoButton.y}=16

## FIG.4

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**PlezeCall™**

PHONE NUMBER...

NOW, WHAT PHONE NUMBER DO YOU WANT PEOPLE TO CALL YOU  
BACK ON?\*AREA CODE: (  ) \*PHONE NUMBER: EXTENSION #: 

- ☐ AUTOMATICALLY DIAL FORWARD TO THE EXTENSION.  
☐ ASK THE ATTENDANT WHO ANSWERS TO DIAL THE EXTENSION

WE NEED THE INFORMATION BELOW FOR SECURITY REASONS – BOTH  
OURS AND YOURS. IT WILL NEVER BE SHARED WITH THIRD PARTIES.  
(SEE OUR PRIVACY POLICY AT [PlezeCall.com](http://PlezeCall.com))

BILLING ADDRESS:

\*FIRST NAME: \*LAST NAME: \*ADDRESS LINE 1: LINE 2: \*CITY/TOWN: \*STATE: CHOOSE STATE \*ZIP: 

\*COUNTRY: UNITED STATES

TO CHANGE THESE SETTINGS IN THE FUTURE, JUST GO TO  
[PlezeCall.com](http://PlezeCall.com)

CONTINUE

BACK TO PAGE 1

UPDATED S SCREEN\_NUMBER IS NOW 1=

**FIG.5**

SUBSTITUTE SHEET (RULE 26)

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## PlezeCall™

LASTLY, PAYMENT OPTIONS...

SETTING UP YOUR ACCOUNT AND INCLUDING A PlezeCall ICON IN E-MAILS IS FREE. WHEN YOU CLICK ON A PlezeCall ICON TO CALL SOMEONE BACK, YOU WILL PAY FOR THE CALL JUST LIKE YOU NORMALLY WOULD WHEN YOU INITIATE A LONG DISTANCE CALL

CHOOSE A PAYMENT OPTION NOW, SO WHEN YOU SEE A PlezeCall ICON, YOU CAN JUST CLICK TO CALL

REMEMBER, IF YOU DON'T "CLICK TO CALL" SOMEONE IN ANY GIVEN MONTH, THERE'S *NO CHARGE*

ALSO, WHEN YOU SEE THE SPECIAL GREEN BUTTON , USUALLY ON WEB SITES, THE CALL IS TOLL FREE. NO PER MINUTE OR MONTHLY FEES APPLY

### OPTIONS:

○ CHARGE CALLS TO MY PHONE BILL. CALLS WILL AUTOMATICALLY APPEAR ON YOUR PHONE BILL UNDER THE HEADING "PARAMOUNT INTERNATIONAL TELECOM" OR "PlezeCall", AT 9.9c PER MINUTE FOR ALL CALLS WITHIN THE CONTINENTAL U.S. AND CANADA, PLUS 49c PER MONTH FOR UNLIMITED USAGE. REMEMBER, IF YOU DON'T "CLICK TO CALL" SOMEONE IN ANY GIVEN MONTH, THERE'S *NO CHARGE*. CLICK HERE TO READ WHY THIS IS A GOOD VALUE

○ CREDIT CARD - 9.9c PER MINUTE FOR ALL CALLS WITHIN THE CONTINENTAL U.S. AND CANADA, PLUS 29c PER MONTH FOR UNLIMITED USAGE. AGAIN, IF YOU DON'T "CLICK TO CALL" SOMEONE IN ANY GIVEN MONTH, THERE'S *NO CHARGE*. CLICK HERE TO READ WHY CREDIT CARD PAYMENT IS SAFE, AND IS ALSO A GOOD IDEA

CLICK HERE TO LEARN ABOUT MASTER BILLING AND EVEN LOWER RATES FOR ACCOUNTS WITH MULTIPLE USERS

AGAIN, TO CHANGE THESE SETTINGS LATER, JUST GO TO [PlezeCall.com](http://PlezeCall.com)

CONTINUE

## FIG.6

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## PlezeCall™

### DOWNLOAD...

THIS SIMPLE DOWNLOAD WILL TAKE JUST A FEW SECONDS, EVEN WITH A SLOW CONNECTION. IF YOU ARE NOT FAMILIAR WITH DOWNLOADING .exe FILES, PRINT THIS PAGE NOW FOR REFERENCE

### STEP 1: DOWNLOAD NOW

- WHEN PROMPTED, CHOOSE "SAVE THIS FILE TO DISK"
- MAKE SURE THE FILE NAME IS PlezeCall.exe
- SAVE IT TO YOUR DESKTOP
- AT THE "DOWNLOAD COMPLETE" SCREEN, CHOOSE THE "CLOSE" OPTION

STEP 2:  
WHEN THE DOWNLOAD IS COMPLETE, MINIMIZE THIS SCREEN AND CLICK THE FILE NAMED "PlezeCall.exe" TO PLACE THE ICON IN YOUR SYSTEM TRAY.  
THEN COME BACK HERE

### CONTINUE

(SEE BELOW FOR VISUAL INSTRUCTIONS)

UPDATED S SCREEN\_NUMBER IS NOW 11=


```
$FORM {id_s}=796  
$FORM {screen_number}=11  
$FORM {GoButton.x}=49  
$FORM {GoButton.y}=5
```

## FIG.7

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## PlezeCall™

CONGRATULATIONS AND WELCOME TO THE PlezeCall FAMILY!

HOW TO SEND A PlezeCall ICON – WHEN YOU FINISH WRITING AN E-MAIL, YOU CAN DOUBLE CLICK ON THE PlezeCall BUTTON  IN YOUR SYSTEM TRAY (IN THE LOWER RIGHT CORNER OF YOUR SCREEN) TO SEND THE ICON IN YOUR E-MAIL

IN SOME E-MAIL SYSTEMS THAT DO NOT YET SUPPORT THE ICON'S FILE TYPE, IT WILL NOT APPEAR AS A BUTTON, BUT RATHER AS A STRING OF GOBBLEDYGOOK TEXT SOMETHING LIKE THIS:

<http://www.plezeCall.com/cgi-bin/plz.pl?pc=21>

<http://www.plezeCall.com/pics/redbutton.gif>"alt="Click here to PlezeCall Me.">Click here to PlezeCall Me.

DON'T WORRY, IT WILL STILL WORK FINE. IT JUST DOESN'T LOOK AS NICE. WE HOPE ALL E-MAIL SYSTEMS WILL SOON SUPPORT THE FILE TYPE SO IT WILL SHOW UP AS A BUTTON

ON ANOTHER NOTE – 10% OF PlezeCall IS PLEDGED TO WORLD VISION – A WORLD HUNGER/RELIEF ORGANIZATION THAT IS MAKING THE WORLD A BETTER PLACE. WHEN YOU USE PlezeCall, YOU IN EFFECT DONATE TO THEIR CAUSE (GO TO [wordvision.org](http://wordvision.org) TO LEARN MORE ABOUT THEM)

### DEMO CALL

CLICK HERE TO TEST PlezeCall BY MAKING A DEMO CALL. WE WILL ALSO SEND YOU AN E-MAIL TO SHOW YOU WHAT THE ICON (LINK) LOOKS LIKE

### LATER

I'LL JUST USE IT LATER, EITHER BY SENDING IT IN AN E-MAIL, OR CLICKING ON AN ICON SOMEONE SENDS ME

REFER PlezeCall TO FRIENDS

MY PlezeCall

UPDATED S SCREEN\_NUMBER IS NOW 13=

\$FORM {id\_s}=792

\$FORM {screen\_number}=13

## FIG.8

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## PlezeCall™

CALL STATUS...

THE STATUS OF THIS CALL (SLIGHT DELAY) IS: CALL HAS BEEN COMPLETED

CHANGE SETTINGS      REFER PlezeCall TO FRIENDS

THE YELLOW BUTTON...

IT'S THE EASIEST WAY TO SET UP A CONFERENCE CALL! SEND E-MAIL TO AS MANY AS 32 PEOPLE. WHEN THEY CLICK ON THE YELLOW BUTTON – FLASH – A CONFERENCE

IMAGINE SENDING THIS E-MAIL TO SIX ASSOCIATES:

"HI EVERYONE, WE ALL NEED TO TALK. CLICK HERE AT 2.00" 

YOU JUST SAVED LOTS OF TIME CALLING OPERATORS, ARRANGING CODES, CALLING PEOPLE TO GIVE THEM CODES, AND SO ON

AND THE CALLS ARE ONLY 9.9c PER MINUTE PLUS 29c PER MONTH IN ANY MONTH YOU USE PlezeCall! EACH PARTY PAYS FOR THEIR OWN CALL

CLICK HERE AND WE'LL PLACE A YELLOW PlezeCall BUTTON ON YOUR SCREEN, AND YOU CAN START PlezeCall CONFERENCING TODAY

TO SUMMARIZE – A LESSON ON BUTTON COLORS

RED  => YOU PAY FOR THE CALL

GREEN  => THE OTHER PARTY PAYS FOR THE CALL

YELLOW  => CONFERENCE CALLING – EACH PARTY PAYS FOR THEIR OWN CALL

UPDATED S SCREEN\_NUMBER IS NOW=  
\$FORM {id\_s}=797

### FIG.9

# INTERNATIONAL SEARCH REPORT

International application No.

PCT/US01/15037

## A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : H04L 12/66  
US CL : 370/352, 401; 709/217

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 370/352,354,356,402; 709/217,218,219; 379/88.17,93.01, 93.03, 93.23, 93.24, 93.26

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched  
None

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)  
EAST, WEST, IBEE

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5,838,682 A (DEKELBAUM et al.) 17 November 1998, col. 2, lines 6-24, 41-59, col. 4, lines 24-47, col. 7, lines 18-53, col. 5, lines 47-52, col. 6, lines 1-15, 22-38, col. 11, lines 56-67, col. 12, lines 1-21, col. 15, lines 26-34, col. 16, lines 1-10.	1-28
A	US 5,991,394 A (DEZONNO et al.) 23 November 1999, col. 2, lines 31-53, col. 3, lines 64-67, col. 4, lines 41-61, col. 5, lines 10-32.	1-28
A,P	US 6,075,783 A (VOIT) 13 June 2000, col. 6, lines 44-60, col. 8, lines 20-30, col. 9, lines 7-27, col. 10, lines 45-52, col. 12, lines 44-67, col. 13, lines 1-36	1-28
A,P	US 6,122,255 A (BARTHOLOMEW et al.) 19 September 2000, col. 3, lines 51-60, col. 5, lines 4-36, col. 9, lines 52-65, col. 10, 37-44, col. 21, lines 47-64.	1-28

☐ Further documents are listed in the continuation of Box C.

☐ See patent family annex.

\* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search

Date of mailing of the international search report

Name and mailing address of the ISA/US  
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